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Ellen Scully-Russ

Richard J. Torraco

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Ellen Scully-Russ[1] & Richard Torraco[2]

1 The George Washington University, Ashburn, VA, USA
2 University of Nebraska–Lincoln, USA

Corresponding author — Ellen Scully-Russ, Human and Organizational Learning, The George Washington University, 44983 Knoll Square, Suite 147, Ashburn, VA 20147, USA.
Email: scullyru@gwu.edu

ORCID: Ellen Scully-Russ 0000-0003-3329-6728
Richard Torraco 0000-0003-2952-1267

Abstract
Economics, demographics, technology, and other factors are changing the composition and availability of jobs. Newer forms of freelance, contingent work, also known as gigs, are gradually eroding traditional jobs. A venue that affords employment opportunities for a growing number of gig workers has become known as the *platform economy*. Those engaged in the platform economy already represent 10.1% of the U.S. workforce. This article explores the factors that give rise to these new work structures and examines the new opportunities they offer for employment and income. The social and economic consequences of the growth of these new work structures, intended and unintended, for workers, consumers, employers, and the public are discussed. The article concludes with a synthesis model of human resource development (HRD) research and the implications of the growth of these new types of work for HRD theory and practice.

Keywords: platform economy, gig workers, nature of work, employee relations

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Economics, demographics, technology, and other factors are changing the nature and organization of work. This is evident in the dramatic changes in the composition and availability of jobs. For example, many jobs are being revamped, while others are eliminated by advances in technology, a phenomenon referred to by some as "technological unemployment" (Brynjolfsson & McAfee, 2014). Furthermore, newer forms of independent work done by those who solicit jobs and customers to generate their own income (Dokko, Mumford, & Schannzenbach, 2015) are gradually eroding the prevalence of permanent jobs. A venue that affords employment opportunities for a growing number of independent workers has become known as the *platform economy*. Platforms are a means for organizing work in which most of the human work is not performed by the platform owner, but by those operating elsewhere in the system. The Eurofound, an European Union (EU) agency concerned with social and employment policies, defines it as ". . .employment that uses a (digital) platform to enable organizations and individuals to solve specific problems or provide specific services in exchange for payment" (Florisson & Mandl, 2018, p. 4). This definition emphasizes the knowledge and service work available through platforms. However, platforms also provide a marketplace to sell products as through eBay or Esty, for example, as well as to share surplus capital resources, such as renting a vacant guest cottage through Airbnb.

The workforce has always included those who prefer the autonomy and flexibility of self-employment. Today those who work independently can opt into the platform economy as a venue for their employment (Manyika et al., 2016). Despite their recent appearance, these new forms of work already are estimated to employ 10.1% of the U.S. workforce (Manyika et al., 2016) and are expected to continue growing (Horowitz & Rosati, 2014). This article explores these trends and the implications for human resource development (HRD) research and practice.

Problem Statement

These changes in the nature and organization of work brought about by the emergence of the platform economy have led to growing anxiety about the precarious nature of employment itself (Zysman & Kenney, 2015). Recent studies on these trends acknowledge the nascent character of the platform economy and debate its current scope and scale

(Schwab, 2016). However, few deny its potential for reshaping the future of work because platform structures and processes not only transform but also transgress the traditional way work is controlled, conducted, and conceived.

This article will explore these trends and the implications for the field of HRD. To be effective in the new economy, the discipline of HRD must expand its knowledge and practices to look beyond the idealized organization template that emphasizes the experience of firms to examine the experience of workers as they engage in work outside the traditional boundaries of a job. Indeed, the HRD field may face an existential crisis in the platform economy related to its current role as a functional agent of employers. What is the future of the HRD discipline in the emerging platform economy that organizes work into contingent gigs rather than full-time and relatively stable jobs? Even though several HRD scholars have considered the implications of a growing number of contingent workers (Russ-Eft, Watkins, Marsick, Jacobs, & McLean, 2014, Scully-Russ, 2005; Torraco, 2016), few have considered pragmatic questions, such as who will pay for HRD practice and how will HRD initiatives be designed, structured, and delivered in a loosely coupled and continuously changing network?

Another implication noted by some scholars is the appearance of a distributed HRD practice (Russ-Eft et al., 2014; Torraco & Lundgren, 2019) wherein the HRD function is carried out by leaders, project managers, peers, vendors, and customers or is embedded into workforce practices and emerging technologies that underly and enable the work processes (Russ-Eft et al., 2014). While this model may be well suited for the emerging network structure of the platform economy, it also raises new questions about the future of HRD as a distinct discipline and field. For example, how will we continue our mission and values and advance our knowledge in this distributed practice space? Also, with no clear stewards of our knowledge and practice, who will prevent economic concerns for expediency and instrumental performance from overtaking the HRD disciplinary imperative to foster human and social development in productive human activity?

Indeed, Barley and Kunda (2001) see fundamental shifts in the nature of work, such as seen in the emergence of the new platform economy, as indicators of broad social change because these shifts give rise to new social structures and tools that people use to reframe their daily routines and craft new identities. In this review, we see that the platform

economy is upending long established economic relationships and the social contract that bind, and indeed define what it means to be an employer, a worker, and a consumer. The challenge for HRD and related fields of human resource management and organization science, however, is that little is known about the factors that give rise to these new work methods and structures. What, for example, are the antecedents of these new types of work (Yaraghi & Ravi, 2017)? How do these trends affect the way work is controlled, conducted, and conceived (Kalleberg & Dunn, 2016)? What are the social and economic consequences of the growth of new forms of work (Heller, 2017; Manyika et al., 2016; Zysman & Kenney, 2015?)? This article will explore these questions and offers a proposed research agenda to deepen our understanding of these trends to align HRD theories and practice with the developmental and performance needs of people and systems in the emerging platform economy.

Method

This problem is addressed by providing an integrative review of the literature related to this topic. The integrative literature review is a form of research that reviews, critiques, and synthesizes representative literature on a topic in an integrated way to generate new frameworks and perspectives on the topic (Torraco, 2005; Webster & Watson, 2002). This methodology is particularly appropriate when existing research is scattered across disparate areas and has not been systematically analyzed and integrated. Such is the case with the literature on the changing nature and organization of work and the social and economic consequences of the growth of new forms of work. This literature was reviewed and synthesized into a new research agenda that offers an integrated perspective on the topic. Three bodies of literature provide the basis for the article: literature on the antecedents of new work methods and structures, on new forms of work and new employment relationships, and on the social and economic consequences of the growth of new forms of work. As the literature reviewed presents Western perspectives and addresses contemporary Western work practices, this review does not represent the changing nature of work as a worldwide phenomenon. The methods for selecting and reviewing the literature in these areas are described next.

Literature on Antecedents of New Work Methods and Structures

Several factors have enabled the growth of new types of work including the increasing popularity and value of online consumer transactions, self-employment, and the appeal of working autonomously, and technological developments, such as advanced robotics, cloud technology, and consumer transactions brokered through mobile apps and electronic media. For the purposes of this article, a body of research on this topic has been categorized as literature on the "antecedents of new work methods and structures." This literature was reviewed to examine the factors underlying the growth of new types of work. Given that most new forms of work have emerged since 2010 (Manyika et al., 2013), literature selected on the antecedents of new work methods and structures was limited to literature addressing changes occurring within the last 9 years.

Literature on New Forms of Work and Employment Relationships

Labor market shifts and the ebb and flow of occupational demand mean that some jobs and occupations are expanding, creating opportunities for more workers, while other jobs are in decline. New employment relationships include autonomous gig workers, self-employed independent contractors, and those employed by others who work ondemand. A large body of research on this topic has been categorized as literature on "new forms of work and new employment relationships" for the purpose of this article. This literature was reviewed to examine how new forms of work have changed employment relationships. Literature on new forms of work was selected only if the literature addressed work transactions involving a third party serving as a broker between the worker/provider and the customer who were brought together through electronic media (i.e., an app or program such as TaskRabbit or Airbnb). This includes all types of work structured in this way including package and home food delivery, handyman and fix-it services, ride hailing, room and storage space sharing, merchandise listings, such as Craigslist and eBay, and professional services, such as those offered through ElanceoDesk, InnoCentive, and CrowdFlower.

Literature on the Social and Economic Consequences of New Forms of Work

The growth of new forms of work has led to social and economic consequences, both intended and unintended, for workers, consumers, businesses, and other stakeholders in the economy. These consequences include the expanded choice, convenience, and value of new online transactions for consumers and the greater autonomy and flexibility and, for some, precariousness of work for gig workers and others employed in the platform economy. This article reviews a body of research on this topic, which has been categorized as literature on the "social and economic consequences of new forms of work." Literature selected on social and economic consequences of the growth of new forms was delimited to the social and economic consequences occurring within the last 5 years or expected in the near future. Most of the literature in this category addresses the current and near-term consequences of the growth of new forms of work because long-term consequences are less predictable and infrequently cited in the literature.

Literature Search and Review

A search was conducted to identify literature on the categories discussed above. Literature was searched in four databases (ERIC, Academic Search Premier, Business Source Complete, and Google Scholar). Key subject terms were used to identify relevant literature in the databases. Literature on the antecedents of new work methods and structures was identified using 31 key subject terms (e.g., *online economy, workplace automation, evolution of the platform economy*). Literature on new forms of work and new employment relationships was identified using 57 key subject terms (e.g., *independent work, contingent workers, self-employment*). Literature on the social and economic consequences of the growth of new forms of work was identified using 24 key subject terms (e.g., *online shopping, precarious employment, advantages [disadvantages] of the platform economy*). The search for literature in all three areas required using a total of 112 terms.

These key subject terms were used to search databases in addition to the subject descriptors provided by the four databases because a majority of the 112 key subject terms are not listed as descriptors in the databases. For example, 73 of 112 key subject terms are not listed as subject

terms in the Academic Search Premier thesaurus; 87 of 112 key subject terms are not listed as descriptors in the ERIC thesaurus, and 65 of 112 key subject terms are not listed as Business Source Complete descriptors. A list of the databases and key subject terms used to search the literature is available from the authors upon request. As pieces of literature were examined in each database, a staged review was conducted (i.e., abstracts, then main body of each literature source) to determine their suitability for selection, with more than half of the literature discarded because they did not meet the criteria for the three categories of literature described above.

A form of synthesis was used to bring together related streams of knowledge from the three major categories of literature into a significant, value-added contribution to new knowledge. The product of this synthesis, found at the end of the article, lays out a comprehensive agenda for the future research of problems and issues in the changing nature and organization of work that require closer analysis. The future research agenda also includes specific research questions to guide the study of each problem or issue (see). This is consistent with the purpose of the article—to examine this issue in an integrated way, leading to a better understanding of the topic.

This article begins with an overview of the platform economy, followed by a review and analysis of the three sections of the literature selected for the study. The discussion explores the implications of the changing nature and organization of work for HRD theory and practice. The article concludes with synthesis model of an agenda for future HRD research.

The Platform Economy

Traditional functional and divisional structures for organizations have given way to new network structures for organizing work in recent years including process-based, matrixed, and most recently, technologically enabled networks referred to as *platforms*. Although there is wide variation in the activities performed in platforms, all platforms are composed of some form of network structure and a matching mechanism that connects consumers with providers through technologically enabled systems and algorithms. However, unlike the conventional marketplace, value is not determined solely by the products or services

available through the platform; rather, the platform's network effects also contribute to its appeal as a venue for provider and consumer transactions (Nica & Potcovaru, 2015). The aggregation of users creates a critical mass that all participants can leverage for their own purposes. Consumers have more choice, and providers or workers gain a larger market for their products or services. The more members and workers who are associated with the platform, the more valuable the network is to the parties involved, which includes the consumer, provider, and platform (Florisson & Mandl, 2018).

Platforms maintain elaborate rating systems to aid actors in the matching process. Consumers rate providers and in some platforms the provider can also rate the consumer. On the worker side, these ratings systems create a dependency on the platform because their ability to garner and increase their work is tied to good ratings that cannot be transferred to another platform or work situation (Florisson & Mandl, 2018). Therefore, although platform workers operate as independent agents within an open platform ecosystem, they can quickly develop a dependency on a particular platform for work and income.

Beyond these very basic features, the nature, size, and scope of the platform economy are disputed. In part, the disagreement is linked to definitional problems that lead to different estimates of the size and characteristics of the platform workers, as well as overall structure and revenues of the platform economy (Forde et al., 2017). That said, by many accounts the estimated number of individuals participating as workers in the platform economy is wide ranging and rapidly increasing. JP Morgan Chase (Farrell & Greig, 2016) examined personal financial data from 2012 to 2015 and found that 4.2% of U.S. adults or 10.3 million people earned income from online platforms, and participation in platform work increased 47% over the 3 years of the study. Similarly, during roughly the same time, the EU estimated 1% to 5% of European adults earned some income through platforms (Forde et al., 2017). It is estimated that nearly 45 million people worldwide have participated in platform work (Forde et al., 2017). Still, these numbers do not convey the true scale of the workforce because many platform workers are not regular participants; in fact, only a small number of workers engage in the platform more than once a month (Farrell & Greig, 2016; Huws, 2016).

Demographic data on platform workers are also inconsistent. Research in the United States (Farrell & Greig, 2016) found platform workers were likely to be young, better educated, and more urban than

the general population. Whereas a Pew sponsored study (Smith, 2016) found that lower income Americans were twice as likely to engage in platform work. The Eurofund (Florisson & Mandl, 2018) found a similar pattern in the EU. Still, recent global data contradict these findings and show that the workforce is diverse in terms of age, background, education, employment status, and motivation to participate (Florisson & Mandl, 2018). Although difficult to explain, one account for the discrepancies in the global demographic data may be that the platform economy replicates inequities in local labor markets and structures, giving rise to complicated participation and demographic patterns that are difficult to capture in underdeveloped data sets. For example, researchers (Florisson & Mandl, 2018) found that in labor markets where opportunity for traditional work is limited, platform work is a main source of income. In these areas, like India for example, the platform workforce is largely male. In Western nations, on the contrary, where the labor market is more diverse, the platform largely provides supplemental income. In these areas, such as in the United States and the United Kingdom, the data show more gender diversity in the platform workforce. More refined data on the platform workforce are required to identify and explain for the difference in the workforce within and across economies.

Education and skill mix of the platform workforce are also difficult to determine. Forde et al. (2017) found that 52% of tasks performed in 200 platforms operating in the EU required low skills, whereas only 16% required high skills. Many of the higher skilled tasks are associated with global platforms that crowdsource micro tasks associated with complex problems and projects, whereas local platforms are more likely to offer service-oriented micro tasks, such as transportation, delivery, or household services that require less skill. Though these local micro tasks can be performed by workers with lower qualifications, in regions and countries where educational attainment is high, the education levels of people performing these services tend to be higher than in areas where education levels are lower (Florisson & Mandl, 2018). This suggests that the education levels of workers performing similar tasks across the platform can vary widely and that many platform workers are underemployed by conventional standards.

Another feature of the platform economy that makes it difficult to both quantify and qualify is the wide variation in the platform's structure, operating mechanisms, and policies. Wide variation exists in

business models, employment relationships, exchange processes and mechanisms, and dozens of other salient characteristics of platforms. For example, how rates are set and fees paid is inconsistent across platforms with some systems being much more transparent than others. The degree to which the platform controls the work and the level of worker autonomy over work varies widely. There are many other features that vary widely and defy potential classification, including, but not limited to, the scale and complexity of the tasks assigned by the platform, the customer (individuals, businesses, other), accessibility to the platform (open vs. closed through screening or subscription fee), who initiates the activity, and more.

The extensive variation among platforms defies attempts to define and classify the platform economy and its workforce. New questions about the nature of work and employment also emanate from this variation. For example, is offering access to a surplus capital, such as a spare guest room through Airbnb, work? Are platform workers freelancers or contingent labor who are dependent on the platform for work? If they are not freelancers, then what is the nature of employment and the employment contract in the platform? These and other questions highlight the difficulties in conceptualizing and defining work in the platform economy. The lack of systematic knowledge of the platform economy, its workforce, and, more specifically, how work is performed limit the explanatory potential of HRD theory and the potential impact of HRD research and practice in this quickly emerging area of work.

Antecedents of New Work Methods and Structures

This section examines the antecedents giving rise to the new platforms and it includes a discussion of the implications for the way work is accomplished at the task level— that is, how individuals perform work. This insight can be leveraged to enhance the HRD field by aligning HRD theory and practice with the needs of the emerging platform economy.

Behaviors of Consumers and Workers

The behavior of consumers and workers has enabled the growth of new types of work. Regarding consumers, today they are more willing to use the Internet to purchase goods and services "sight unseen,"

driving the expansion of online commerce and the decline of traditional retail and department stores. In addition, consumers are now more willing to pay for temporary access or to share products, often at a reduced cost, rather than own them. Examples are seen in the success of Airbnb's room rentals and Getaround's car rentals. This propensity of people to make their unused resources available to others and to share rather than purchase products and service has given rise to the "sharing economy" and "peer-to-peer" economy, both variants of the platform economy.

Regarding worker behaviors, whether by choice or necessity, more people today are self-employed or engaged in project-based work that, while allowing more flexible work schedules, lack the long-term employment security of traditional jobs. Self-employment and working independently are more common today than at any time in the past (Torpey & Hogan, 2016). The greatest participation in platform work is among people who experience the highest income volatility, the young and the poor (Farrell & Greig, 2016), which suggests that many use the platform to supplement earnings from work in traditional jobs.

Regardless of whether workers use platforms and other contingent forms of work to construct a career or bolster their income, career patterns are shifting as many workers move in and out of traditional roles in firms and new gigs in networks. As workers oscillate between different forms of work, they may adopt new career strategies and skills for self-marketing, self-regulation, and identity alignment within a complex network of professional and personal relationships (Vallas & Prener, 2012). The emerging platform economy is now facilitating and distributing these new career patterns, calling for enhanced career development research and practice in the HRD field.

In short, changing patterns of consumer shopping and spending and new employment relationships have given rise to new types of work methods and structures. As seen in the *sharing economy* and *peer-to-peer* economy, these new structures are grounded in a basic premise—there is economic value in the unused potential in resources that are not fully exploited by their owners. This constitutes a new, untapped market for consumers and providers who see the mutual benefit of transactions based on pooled resources. In the future, this trend may change how the economy functions by creating new forms of exchange that challenge the basic precepts of capitalism (Nica & Potcovaru, 2015). According to Schmid (2006), these shifting market relationships provide a moral

opportunity for society to rethink individual rights and responsibilities, in other words, the social contract that underlies the nature and organization of work.

Financialization of Industry

Financialization is a process by which financial institutions and markets increase in size and influence in the economy. Brought about by innovations in capital markets (Kochan, 2011) and globalization (Appelbaum, 2012), it is changing the nature of capitalism by reorienting accountability to one stakeholder, the stockholder. As the market becomes the dominating interest inside firms, the locus of control moves from production or operations to finance. Leaders are under new pressure to value short-term market interest over long-term goals such as technology, product, and HRD (Batt & Appelbaum, 2013).

In response, firms have stripped down to their core competencies (Batt & Appelbaum, 2013) and reworked their supply chain to outsource work to contingent labor markets in the United States and other countries (Appelbaum, 2012). Though individual contractors and smaller entrepreneurial enterprises garner more work, they also bear a greater share of market risk (Appelbaum, 2012). At the same time, the internal labor market inside firms that once provided the basic mechanisms for worker socialization and continued advancement has been largely dismantled. In addition, given the continuous shifts in the market, any work can be deemed nonessential at any time, thereby leaving all workers open to the risk of redundancy. Therefore, financialization has changed the nature of work, both inside and outside firms, by making it contingent. The emergent platform economy, by adopting the gig as the basic structure for work, is perhaps capitalizing on the growing trend and acceptance of the changing nature of work of today.

Political, Social, and Institutional Shifts

Pressing political and social needs have also disrupted traditional forms of work and employment. Financialization leads to shrinking budgets and constrained public finances that have diminished the resources and political will for meaningful social change (U.K. Commission for Employment and Skills, 2014). In addition, there has been a steady growth

in the income inequality within the Western world, in part related to the changing nature of work, creating new social pressure to reduce poverty (Page, 2014), create jobs (Osterman & Schulman, 2011), and raise wages (Shipley, 2004). All of these factors enable alternative forms of work, while also giving rise to new debates over how to structure and regulate the labor market in the new and emerging organization of work, such as work in the platform economy.

Indeed, perhaps the most significant institutional shift has occurred in the labor market. A labor market, according to Osterman and Burton (2004), is constituted by the dynamic interaction of social, economic, and political forces that determine the way work is organized and how workers are treated at work. In the United States, this process is largely located inside firms where collective bargaining agreements and other formal firm-based employment policies regulate the employment relationship of permanent employees. Now with the decline of unions and the breakdown of centralized control processes in firms, employees have much less say over the terms and conditions of their employment. In addition, with the growth of contingent work arrangements, contingent workers are no longer employees and employers are not legally required to adhere to employment regulations in their dealings with this growing portion of the workforce.

Osterman and Burton (2004) found that these and other shifts in the employment relationship have been accompanied by a change in the normative dimension of the labor market. Worker attitudes and expectations have shifted because firms are unilaterally rewriting the rules of employment. These trends raise questions of fairness and equity in the labor market. Kaufman (2013) observed that each nation has a concept of what is fair in employment relations and that if these values are violated, social and political pressures will force a change in the rules. Adler (2016) concurred when he observed that the future of work will not be determined by technology, but by the regulation that will govern how it used. Still others (Appelbaum & Batt, 2014; Bernhardt, 2012) questioned whether the political will exists to mobilize the social action required to establish new, more relevant labor market regulations in the current political economy. New HRD research and practices on the emerging nature and organization of work may also need to focus on the emerging institutional framework and how it can be enhanced through systemic HRD strategies.

Technological Factors

Technological factors have the potential to transform work, business, and the global economy (Manyika et al., 2013). Referred to as *disruptive technologies*, these factors have great potential to drive massive, economically disruptive change. The literature review identified six of technologies that have particular implications for improving the form and functioning of the platform economy, including computing, artificial intelligence, the Internet of Things, cloud technology, advanced robotics, and 3-D printing. Each also has implications for the nature of work and the role of HRD research and practice in the emerging platform economy.

Mobile computing devices with Internet connectivity are more available and less expensive than ever. Wireless web use now exceeds wired use. In addition to enabling ubiquitous social interaction, the mobile Internet has applications for business, commerce, and government that allow efficient delivery of products and services and increase workforce productivity. Software development for mobile devices, commonly known as "apps," is also an increasing source of work for gig workers who create apps on speculation for platforms (e.g., Apple Store) that sell and distribute them (Bergvall-Kåreborn & Howcroft, 2013). Other platform workers use mobile apps to increase productivity and increase income, for example, TaskRabbit workers use mobile apps to minimize transition times between jobs, creating time for more gigs.

Artificial intelligence, computer-mediated machine learning, and voice recognition are being combined to automate knowledge work (Bughin et al., 2018). These advances continue to transform how knowledge work is organized and performed (Chui, Manyika, & Miremadi, 2015; Jacobs, 2017). These technologies will make the platform more accessible to knowledge workers and at the same time may limit their professional judgment and discretion. For example, new tele-medicine technology connect doctors and patients via the Internet, while new automated medical records embed protocols that predetermine a course of treatment for common diagnoses in part, limiting physician authority.

The Internet of Things transforms processes and systems in business and industry by embedding Internet-connected sensors and regulators in equipment that can monitor and regulate operations and output. The Internet of Things can track factory production, monitor the flow of fluids through utility lines, and measure moisture for forestry and agricultural purposes. Embedded in this technology is the capacity to monitor,

diagnose, repair, and maintain machines and consumer products, potentially wiping out a wide range of middle-skilled technical and customer service jobs.

Related to the Internet of Things is cloud technology, which enables the movement of data processing or data storage service to the Internet, minimizing the need for local processing power and resources. Cloud technology has improved access to a broad range of real-time information and increased the analytical capacity of knowledge workers. In the future, the cloud will sort, store, and retrieve (e.g., medical records clerks), as well as deliver (e.g., postal jobs) large volumes of detailed information (Katz, 2019; Postal Regulatory Commission, 2019), eliminating many administrative and service jobs, a stable source of employment for many workers today.

Physical task and jobs will also be impacted by new technology. For example, advanced robotics makes use of increasingly capable robots with enhanced senses, dexterity, and intelligence to automate tasks or complement human performance. Advanced robots are now used in a wider range of business and industrial applications due to accelerating advancements in machine vision, artificial intelligence, machine-to-machine communication, sensors, and actuators. Robots not only enable the off-loading of physical work, but also take on many analytical tasks; therefore, they hold great potential to change the nature of work for workers across all skills levels. In addition, 3-D printing is an additive manufacturing technique that creates a product by systematically adding layers of material to create a model. With 3-D printing, an idea can go directly from a 3-D design file to a complete product, bypassing many traditional manufacturing steps and reducing the amount of material wasted. This enables on-demand production, which saves time, reduces the need for costly inventory, and enables the inexpensive manufacturing of customized parts and small batch production runs. The ability to produce customized parts has enormous potential to allow people to repair and extend the life of manufactured goods far beyond the current life expectancy, resulting in a net decrease in the demand for new manufactured goods and a decrease in manufacturing jobs (Wohlers Associates, 2019).

Combinations of any of these technologies could multiply their impact. For example, the mobile Internet could lead to more applications for the Internet of Things, and both could advance the automation of knowledge work. These technologies have given rise to new ways of

accomplishing work and they are also changing consumer needs and creating new market opportunities. Together these trends give rise to a dynamic labor market in which jobs are eliminated, existing jobs are transformed, and entirely new jobs appear. The impact on the future of work is a topic of great debate between those who foresee the potential for a jobless future accompanied by growing economic and social inequality (World Economic Forum, 2018) and those who are more optimistic and project the continued expansion of the economy and labor market (Manyika et al., 2016). In either case, it is clear that the nature of work and employment relationships is undergoing great change. It is imperative that field of HRD align and leverage its theories and practices to ensure that these trends expand, rather than limit the developmental potential of work in the future.

New Forms of Work and Employment Relationship

A recent study by the World Economic Forum (2018) sought to bring further clarity to the implications of these antecedents and other trends for jobs and the future nature of work. The study asked Human Resource (HR) Directors leaders in large, multinational firms to identify how these trends would influence their hiring and talent management decisions over the next 5 years. The study found 50% of leaders foretold a reduction in the full-time workforce by 75 million, the creation of up to 133 million new jobs, or a net gain of 58 million. This growth, however, will be offset by significant shifts in the nature, format, and permanency of jobs. For example, HR leaders projected a major shift in the division of labor between humans and machine. Machines will increase their contributions by 57% by taking on new roles in reasoning, decision-making, administrative functions, and information retrieval. At the same time, firms will increase their reliance on contractors and develop new project-based work designs and remote staffing arrangements that engage employees in a more flexible manner (World Economic Forum, 2018).

Work is made more complex by these trends, requiring simultaneous collaboration among many functional specialties and professions. To respond to this complexity, the basic template for organizing work has shifted from functional specialization and fulltime employment toward project teams and contingent assignments (Guile & Lahiff, 2017). Indeed, cross-disciplinary project teams have become the unit, as well as the

driver of economic action. Some (Jensen, Thuesen, & Geraldi, 2016) also suggest that projects drive all social and personal action in a complex society. As work and life are increasingly connected and organized around a mix of interconnected projects, people form new portfolio careers (Castells, 2011) that enable them to connect a series of disconnected work, learning, and personal experiences to craft a coherent biography (Gee, 2018). Contingent project teams are now the norm throughout the economy, causing a shift in the conventional employment relationship from a stable, full-time job to more casual forms like freelance, temporary contracts, and self-employment (Guile & Lahiff, 2017). Today, more people move in and out of different forms of employment contracts, and not necessarily in sequence or concurrently, and these fluctuations in employment lead to gaps in income that many workers cannot withstand (Bergvall-Kåreborn & Howcroft, 2013). This new form of labor market risk is giving rise to calls for new social protections for contingent workers, including those who participate in the platform economy.

The need for new regulation in the platform economy is essential because the status of platform workers and the nature of their employment relationship within the platform does not conform to existing employment law, leaving many platform workers outside of the reach of the legal protections that ensure their employment rights. Generally, who has most control over the employment relationship—the employer or employee—determines whether someone is considered an employee or an independent contractor. Determining the control over work in the platform economy is difficult. To start, there are at least five kinds of control that could belong to either the employer (i.e., platform owner) or the employee (i.e., contractor or service provider), depending on the business model: (a) price charged to the customer, (b) equipment used by the worker, (c) means of service delivery, (d) venues for advertising the service, and (e) the worker's schedule (Hagiu, 2015). These five forms of control over the employment relationship allow a range of options—from full control by the firm (e.g., vehicles for traditional taxi companies) to minimum requirements by the firm (e.g., car age and maintenance for Uber drivers) to full control by the worker (e.g., the vehicles used by Postmates couriers). Each platform develops its own set of control mechanisms with many possible combinations. While the right combination—the model creating the most value for the company and its workers—may be at one end of the full-control-to-no-control spectrum, in the platform economy we see that it is more likely to fall in the ill-defined

middle, where company and worker could split control factors many different ways. This lack of clarity has lead legal experts, labor market scholars, and worker advocates to question the adequacy of current legal and regulatory oversight of new employment and labor practices in platform work.

Determining the employment status of platform workers is therefore difficult and the subject of much research and debate in the literature on the platform economy (Donovan, Bradley & Shimabukuro, 2016). Meanwhile, while the debate plays out in policy circles, platform workers are in a legal limbo because they do not fall into any established employment category. They are not really independent contractors or freelancers because many are dependent on the platform and its rating system for work and yet they are bound to the terms and conditions of the platforms which commonly deny the existence of formal employment relationship with workers (Florisson & Mandl, 2018). Once workers agree to these terms, they are cut off from the legal and social protections afforded to regular employees.

In this review, we see that while platforms offer new business and employment models, they also give rise to new challenges and policy questions related to social protections and employment regulations. As platforms grow, and many anticipate they will, an increasing number of workers will be left out of the social protection systems. Employment-related risk and insecurity will continue to rise at the individual level, and the ability of the social protection system to meet the needs of a growing number of people will also be compromised (Florisson & Mandl, 2018). HRD scholarly practitioners need to become knowledgeable of employment law and other broader institutional regulatory trends in order to contribute to new social protections that ensure platform workers support for continued development and engagement in productive work.

Social and Economic Consequences of New Forms of Work

Viewed from the consumer's perspective, the platform economy offers many benefits that were not previously available. For example, accessing products and services through web-enabled platforms offers consumers expanded choice, convenience, and value. Greater choice and the ease with which consumers can switch between alternative providers also reduce the possibility of competition-dampening monopolies

(Yaraghi & Ravi, 2017). Compared with traditional, facilities-intensive, brick-and-businesses, monopolies are also diminished by the low barriers new providers face to enter the platform economy. Although this is offset by the challenge of building a network of users in a virtual environment, the platform economy can nonetheless lead to favorable cost, convenience, greater variety, and more responsiveness to consumers' needs.

Gig workers who value the variety of work environments and assignments that are not available to permanent workers view the platform economy as beneficial. Many can work wherever there is an Internet connection. Others appreciate the autonomy of not being tied indefinitely to the same job responsibilities. Moreover, for those who wish to explore different career directions, the gig economy provides the opportunity to experience different job environments (Torpey & Hogan, 2016). Gig workers, many of whom are unlikely to know where the organization they work for is physically located, often cite flexibility and autonomy as the most desirable aspects of their work. Although many workers value the freedom and variety of opportunities offered by the platform economy, others feel exploited by jobs with tenuous job security and disenfranchised by a system with little regard for the sense of belonging felt by employees in traditional organizations. Exacerbating the alienation felt by these workers, they have been told they are expendable by misguided executives. Lukas Biewald, the CEO of CrowdFlower, a crowdworking platform that sorts and enriches data, bluntly told an audience of young IT professionals:

> Before the Internet, it would be really difficult to find someone, sit them down and get them to work for you, and then fire them after ten minutes. But with technology, you can actually find them, pay them a tiny amount of money, and then get rid of them when you don't need them anymore. (Marvit, 2014, p. 8)

Disenfranchisement, dissatisfaction with precarious employment, and uncertainty about future work make many unwilling to participate in the gig economy and may inhibit its growth (De Stefano, 2016).

Others are put off by the platform economy because of social and professional isolation. Heller (2017) described the experiences of gig workers including one who worked for TaskRabbit. Excerpts of Heller's (2017) encounter with the TaskRabbit worker capture the social and professional isolation experienced by some gig workers:

> I realized that he (the TaskRabbit worker) probably visited strangers several times a day, meting out bits of himself, then moving on, often forever, and I considered what an odd path through professional experience that must be. He rarely met other taskers, he said; there were no colleagues in his life whom he could share experiences and struggles . . . "The gig economy is such a lonely economy," he told me. (p. 32)

The platform economy has raised concerns about the applicability of current legal and regulatory oversight of new employment and labor practices. As already discussed, the employment status of an increasing number of workers in the platform economy is difficult to determine and oftentimes is determined by how the platform choses to define its relationship with gig workers. For example, the office cleaning workers of Managed by Q, although on-demand and part-time, are employees, not contractors, whereas Uber considers its drivers independent contractors. This illustrates the ill-defined status of gig workers who often are neither fully independent of their employers nor full-time employees, which has led to calls for the creation of a new, intermediate employment status—one that fills the gap between those who are either employed by or contractors of the firms that pay their wages.

The consequence for platform workers is that this limbo status cuts them off from a host of social protections and benefits that can fortify them in a more fluid labor market. They do not have access to employer provided training or mentoring that can help them build or maintain requisite employment and employability skills. Platform workers who are cut off from these and other firm-based opportunity structures may find themselves in a situation facing many low-waged workers. Research shows that low-waged workers get stuck in dead end positions because the more unstable a career track, the less likely they can leverage prior work experience to find a better job (Scully-Russ, 2005). Workers who lack the basic skills to enter the platform and those who do not have access to the resources to garner the high ratings to succeed in the platform economy may face significant barriers to entry and advancement in the emerging platform economy.

Finally, the increasing use of online recruiting by employers to recruit new employees circumscribes the breadth of information each party has about the other. Virtual communications instead of face-to-face interaction in the hiring process leads to misunderstandings and mutual

uncertainty, and reduces the probability that best people will be hired and that the job seeker will choose the best employer (De Stefano, 2016). In this case, the platform economy would be better served by the thorough scrutiny characterized by traditional, research-based, selection practices.

Taken together, we see how these employment shifts in platform structures have ushered in a new context for organizing work with the potential to upend economic relationships and the social contract that bind and indeed define what it means to be an employer, a worker, and a consumer. In response to the potential significance of the platform economy, scholars have turned their attention to the implication for the nature and organization of work (Schwab, 2016), workers (Bergvall-Kåreborn & Howcroft, 2013), and labor relations law and systems (De Stefano, 2016). However, Kuhn (2016) noted that Human Resources and HRD (HR/D) research on the platform economy and similar shifts in the nature and structure of work, to the extent it exists, is focused on information systems that improve labor market efficiencies and access to gig employment, leaving questions related to traditional HR/D functions such as recruitment, compensation, or training and development largely unexamined.

HRD scholar-practitioners, in addition to helping to structure work and improve performance, are responsible for facilitating the social and workforce integration of the growing number of platform workers, as well as for the development of the skills needed by those participating in the platform economy. The mechanisms of social and labor market integration, including employment regulations (legal and social protections), must be different from those that regulated the job-based labor market and the same can be said for the skills required to enter and succeed in the emerging platform economy. The discussion of these findings is followed by the implications for HRD practice, theory, and research.

Discussion

The relationships among the antecedents of new work structures, the changing organization of work, and the social and economic consequences of these changes are represented in **Figure 1**. The antecedents of new work methods and structures are listed on the left side of Figure 1. Rather than shaping new work methods and structures individually,

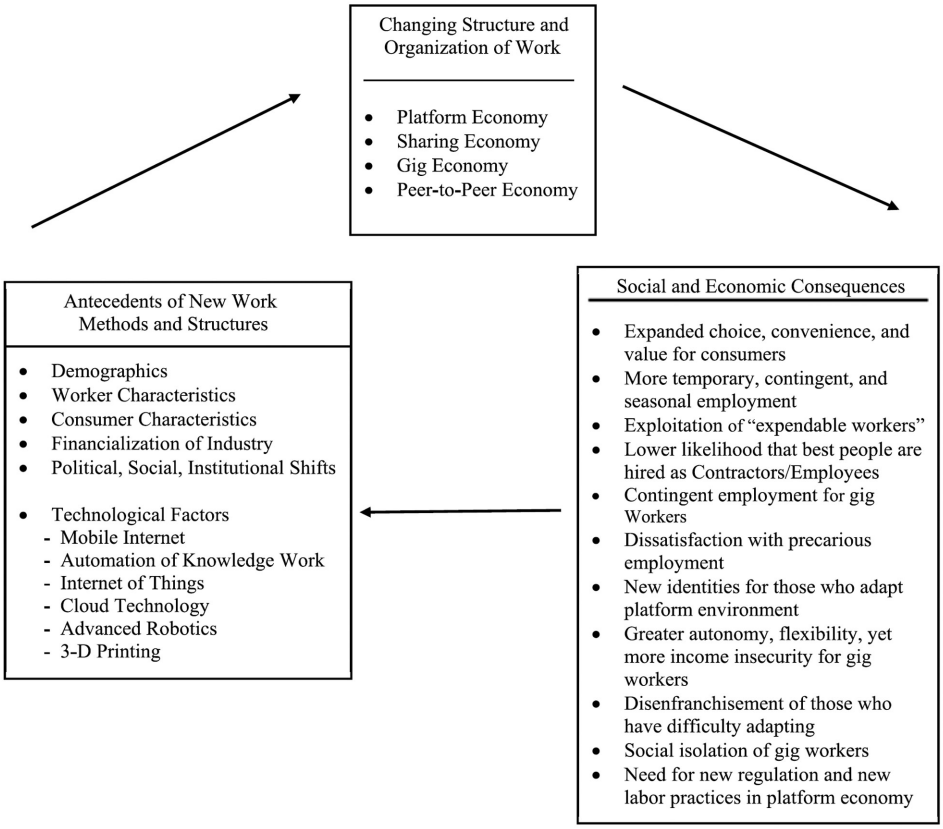

Figure 1. A model of the changing nature and organization of work.

the antecedents interact with each other as the basis of new work organizations and nature of work. Using several of the antecedents as an example, as workers gain experience with new technologies, their growing competence results in products and services of higher quality, which, in turn, are more appealing to consumers and more likely to meet social and political needs.

These antecedents give rise to changes in the structure and organization of work as shown by the arrow leading to the changes in jobs and work organizations represented at the top of Figure 1. The changing structure and organization of work is apparent in the platform economy and its analogs (i.e., sharing, gig, and peer-to-peer economy). The platform economy enables electronically mediated transactions between buyers and sellers brokered by third-party providers and the emergence of a growing number of gig workers, mobile apps, and online consumers. These changes have led to social and economic consequences, both intended and unintended, as represented by the arrow to the consequences listed on the right side of Figure 1.

The social and economic consequences of new forms of work effect the workers engaged in this work, consumers, platform owners and business leaders, policy makers, and the public at large. Some of the social and economic consequences are beneficial, such as the expanded choice, convenience, and value for consumers and the freedom and variety of opportunities offered by the platform economy to workers; some of the consequences may be detrimental (i.e., tenuous job insecurity), whereas other consequences are likely to require regulation to protect the interests of gig workers and other participants in the platform economy.

Finally, Figure 1 shows that, rather than being end points in the new work environment, the social and economic consequences influence the antecedents of new work methods and structures on the left side of Figure 1. to create an iterative cycle that captures the continuous nature of change in today's work environment. The arrow between these two elements represents this iterative cycle. For example, the popularity and value of online consumer transactions, a consequence, would likely stimulate more consumer interest and, in turn, lead to the proliferation of venues for online commerce. On the contrary, the social and professional isolation experienced by some gig workers, also a consequence, may lead to their disenfranchisement and reduced participation in the gig economy. The developments have important implications for HRD practice, which is addressed next.

Implications for HRD Theory, Research, and Practice

New skills and expertise. In traditional jobs, the jobholder must have a given set of skills to perform the finite set of tasks encompassed by the job. Workers have always needed the capability to adjust to new equipment and procedures. However, providers in the rapidly changing platform economy must not only develop new skills but also adapt to new online venues through which these skills are delivered. They need the ability to adapt quickly to changes in the marketplace and the capacity to work more autonomously than traditional workers. HRD practitioners must reconsider the current training and development processes in place in traditional organizations. Traditional approaches to planning and delivering HRD strategies simply cannot respond to the rapid and continuous change occurring in work today. The support for learning must be embedded in and broadly distributed throughout the web-based networks, tools, and relationships that constitute work in the platform

economy. In this light, HRD practitioners must take on new roles as the architects of new learning systems that can respond to the continuous learning demands of new forms of work.

New models of education and workplace learning. New models of education will be needed because workers will be forced to think constantly about their next assignment, the skills required for that assignment, and the education and credentials required to acquire the skills for the assignment. This relies increasingly on mini-courses and

> *nano-degrees*, which focus on imparting specific skill sets that are currently in high demand in industry [and on] . . . *on-demand* learning resources, which provide manageable chunks of curricula that learners can access whenever they need to increase their literacy in a new technology at times and locations of their choosing. (Barabas, 2015, p. 5)

HRD scholars and scholarly practitioners must become more knowledgably of trends in the delivery of formal education for workforce skills and they must also consider how to provide access to all workers who need to engage in continuous learning and skills development to keep their skills and credentials current.

At the same time, HRD scholars and scholarly practitioners will also need to rethink their workplace learning theories and practices to account for the complex interactions within and across the emerging new structures and organization of work. As found in this review, platforms and their antecedents have set into motion dynamic interactions among people, new enabling technologies and tools, regulation, expectations, and other unforeseen objects giving rise to continuous and unanticipated change in the daily experience of people at work. These shifts not only change the nature of work, but they are having an effect on the overall direction of the broader system (Justice & Yorks, 2018), including the labor market and economic systems. Social-material learning theories bring new understanding to these dynamics for they specify ". . . how the complex relationships among materials (bodies, objects, settings, technologies, etc.) as well as social dynamics (interactions, symbols, intentions, desires, etc.) affect everyday practices and learning . . ." (Fenwick, 2018, p. 3). As work becomes more entangled with technology and more enmeshed within complex social and web-based networks, a new

understanding of learning and knowing is emerging to account for the interaction and the agency of nonhuman objects in learning within and across the social-material networks that comprise the emerging organization of work. This new perspective challenges the constructivist and humanistic philosophies and theories that currently dominate the field of HRD and may require a new philosophical and empirical agenda to update and align the HRD disciplinary knowledge to the realities of the changing nature of work.

New leadership skills. As expanding the community of producers and consumers is necessary to sustain platform organizations, leaders need the ability to motivate producers (e.g., app developers, content providers) to contribute to the network and the ability to balance and satisfy the interests of diverse participants in the network ecosystem (i.e., platform owners, providers, producers, and consumers). In turn, workers need new opportunities to access the ongoing education and training necessary to sustain employment and build a career in a contingent labor market. New mechanisms are also required to provide workers, as well as consumers, with a voice in constructing the new rules that determine what happens to people working in platforms. Achieving these outcomes will require HRD scholar-practitioners to develop a new spirit of political-economic activism and new technical knowledge and political skills to leverage social, economic, and technical advances in the changing nature of work (Scully-Russ, 2016). To craft this new activist role, HRD scholar-practitioners can collaborate with worker advocates and labor market scholars to contribute HRD research and knowledge about human development at work to bolster legal and legislative initiatives aimed at clarifying the legal status of platform workers providing them with new social protections to improve their working conditions. HRD scholars and scholar practitioners may also turn their attention to technology and develop new partnerships with technology innovators and developers to ensure that the designers consider the impact on work and workers in the design. Although technological change may be inevitable, HRD intervention into the early design of emerging technologies may result in technology designs that enhance human performance rather than replace human effort in the work process, hence limiting the negative impact of technology on the workforce. Finally, HRD scholars and scholar-practitioners must engage in the political process to ensure a new policy framework that accounts for contingent nature

of work and provides platform workers with new social protections and benefits, including access to continuous learning, to ensure quality working conditions and stable income.

Synthesis Model: Research Agenda

We recognize that we do not know enough about the changing nature of work in the platform economy or the forces shaping its underlying social and employment relationships. Existing labor market theories grew from a pragmatic research tradition in which scholars moved between academia and practice to develop deep, firsthand knowledge of work and organizations (Osterman & Burton, 2004), yet today scholarship has moved away from this form of embedded organizational research required to develop a fine-grain understanding of work. Barley and Kunda (2001) link this move in workplace research to the turn in the 1960s and 1970s to systems theory and greater levels of abstraction, changing methodologies focused on the analysis of large data sets in labor market research, and increasing specialization in the broader field of organizational science. This includes the specialization of HRD that considers the developmental and performative dimensions of work but does not deeply explore the factors that shape the nature of work in the first place. Organizational and labor market scholars (Barley & Kunda, 2001; Kochan, 2011; Osterman & Burton, 2001) argue the need to bring work back into organization studies to develop better images of post bureaucratic organizing (Barley & Kunda, 2001, p. 88). The discipline of HRD, with its focus on the leadership, development, and performance in the workplace, is uniquely positioned to respond to this call with innovations to workplace and organizational studies.

A comprehensive agenda for the future research of problems and issues in the changing nature and organization of work, and specific research questions to guide the study of each problem or issue are presented in **Table 1**. As a form of synthesis, this agenda for further research brings together related streams of knowledge from the literature review into a significant, value-added contribution for further study of the topic (Torraco, 2005).

Table 1. Agenda for Further Research on the Changing Nature and Organization of Work.

Agenda for further HRD research

Problem or issue in need of research	Proposed research questions
1. The locus of control over working conditions and employment is uncertain in unstructured, virtual work environments (Hagiu, 2015). That is, who controls these factors—the worker or the employer/ platform owner? Traditional full-time employment has given way to new hybrid models of project-based work, remote staffing arrangements, contractors, freelance work, temporary contracts, and self-employment (Dokko, Mumford, & Schannzenbach, 2015). This has blurred the boundaries among the roles of worker, employer, and consumer.	1(a). How have changing work and labor market structures given rise to new work roles, employment relationships, and increasingly precarious working conditions? 1(b). What does it mean to be an employer, a worker, or a consumer in the gig economy when there is now more overlap and change than ever among these roles? 1(c). What is it like to be a gig worker operating on your own in an expansive and uncertain online work environment?
2. We cite accounts of gig workers with volatile incomes who use platform work to supplement earnings from traditional jobs (Farrell & Greig, 2016), those who feel exploited and disenfranchised by jobs with tenuous job security (Marvit, 2014), and those who experience the social and professional isolation of working alone (Heller, 2017). Although accounts appear in the literature of gig workers who are both satisfied and dispirited with their work, more definitive research, particularly descriptive studies, are needed to explore in more depth the personal, psychological, and social aspects of working independently in unstructured environments.	2(a). What are the psycho-social dimensions of working in constantly changing, unstructured, virtual work environments? 2(b). How can the social and professional isolation of the independent gig worker be ameliorated? 2(c). How is the HRD field to address the challenges and concerns about worker safety, health, sense of belonging, work-life balance, and undesirable working conditions?

Table 1. (continued)

Agenda for further HRD research

Problem or issue in need of research	Proposed research questions
3. Traditional workers needed a given set of skills to perform the finite set of tasks encompassed by the job and the ability to adapt to new equipment and procedures. However, those in the dynamic platform economy must not only develop new skills, but also adapt to new online venues through which these skills are delivered. They need the ability to adapt quickly to changes in the marketplace and the capacity to work more autonomously than traditional workers. In short, the skills needed to succeed in the platform economy are different from those for traditional jobs (Rainie & Anderson, 2017).	3(a). What skills and expertise are required to enter and succeed in the emerging platform economy? 3(b). What are the methodologies required to predict future skill requirements in a rapidly changing labor market like the platform economy? Is predication possible, or desirable and if not, what is an alternative way to understand and respond to changing skill requirements?
4. Continuous adaptation to the changing needs of customers and context is a constant for those working in the platform economy. Workers must keep pace by frequently updating skills that are in demand and needed "just-in-time." This cannot occur through traditional HRD training that is bound by place and time. In this context, HRD practitioners must adopt new roles as the architects of learning systems that can respond to the continuous learning demands of new forms of work.	4(a). How are skills and expertise required to work in the online platform economy developed? 4(b). What role do HRD professionals play, if any, in fostering the development of the skills required to work in this environment (Scully-Russ, 2016)?

Table 1. (continued)

Agenda for further HRD research

Problem or issue in need of research	Proposed research questions
5. Worker learning and development cannot be place and time-bound for those in constantly changing, virtual work environments. As traditional training sessions do not suffice, how can support for learning be embedded in and broadly distributed throughout virtual networks, tools, and relationships that constitute work in the platform economy? To address this, HRD researchers first will need to rethink theories of learning that underlie worker knowing and doing in this environment. New learning theories are required that account for the collective dynamics in the workplace learning cycle, as well as the human and nonhuman actors in work practice (Fenwick, 2016).	5(a). What theories and models of learning are needed to support the dynamics of learning and development in constantly changing, unstructured, virtual work environments (Fenwick, 2016)? 5(b). How will theories and models account for human and nonhuman actor interactions in these environments? 5(c). What philosophies and worldviews underlie emerging theoretical explanations of how learning occurs in new work environments?
6. The mechanisms of social and labor market integration, including labor laws, employment regulations, and social protections, are different in the platform economy than those that regulate the job-based labor market (Manyika, Lund, Robinson, Valentino, & Dobbs, 2015).	6(a). What legal status do gig workers have with regard to the protections that cover most workers (i.e., collective bargaining, workers' compensation, unemployment insurance, overtime pay, and minimum wage compensation) (Rogers, 2016)? 6(b). What legal protections and employment regulations are needed for workers, employers, and intermediaries to assure fairness and equity in the platform economy (Harris & Krueger, 2015)?

Table 1. (continued)

Agenda for further HRD research

Problem or issue in need of research	Proposed research questions
7. Recent developments in the world of work require significant changes in the skills and expertise of workers, in the methods and means of developing these skills, and in the theories, models, and perspectives HRD must adopt to support these new responsibilities of the profession.	7(a). What do these substantial changes mean for HRD researchers, future empirical studies, and theoretical research in HRD? 7(b). What do these changes mean for HRD practitioners? How will their role change as facilitators of, and advocates for, work-based learning and development?
8. Existing labor market theories grew from a pragmatic research tradition in which scholars moved between academia and practice to develop deep, firsthand knowledge of work and organizations (Osterman & Burton, 2004), yet there is diminished interest among HRD scholars in observational studies in the workplace to assess the work itself and the work activities of employees, supervisors, and others. Organizational and labor market scholars (Barley & Kunda, 2001; Kochan, 2011; Osterman & Burton, 2004) argue for the need to bring work back into organization studies to develop better images of postbureaucratic organizing. Analyzing work and developing an intimate knowledge of the workplace are necessary if theory, research, and practice are to keep pace with the changing dynamics of work and occupations (Barley & Kunda, 2001; Luff, Hindmarsh, & Heath, 2000).	8(a). As HRD scholarship becomes further removed from its work-based origins, how can HRD professionals take advantage of the developmental opportunities of work experience if they are unaware of what the work itself entails? 8(b). What research designs and methods are needed to observe work in a dynamic platform network wherein work is bounded by individual projects conducted by contingent gig workers. How can HRD researchers gain a vantage point on this work and follow the experiences of individual gig workers in a fluid network?

Conclusion

This literature review examined the antecedents and consequences of the new platform economy. Much of the literature on the antecedents posit the platform economy is emerging from the convergence of immutable trends that fortifies it against the influence of broader social controls. Technology, for example, is seen as having a historical trajectory of its own with few opportunities to influence its impact on the nature and organization of work. On the contrary, this analysis found great opportunity for HRD scholar-practitioners to expand and leverage the HRD knowledge and practices to ensure these antecedents result in more, not less opportunities for human and organizational development and performance. HRD's leverage lies in the co-emergent nature of new economy, specifically understanding that the antecedents, work organization, and consequences co-emerge to construct new expressions and experiences of work. If we perceive the new platform economy as a co-emergent system, then we also must acknowledge that formative interventions, even small adjustments to one dimension of the system, can influence the trajectory of the whole. For example, how might new social and employment protections for workers shift the demand for workers and affect the design of the technology employed by platforms? With more worker protections, would platforms employ technology to enhance or diminish the role of workers and what effect would these decisions have on the platform structures its relationship with customers? The HRD discipline with its basis in systems theory and its core knowledge of human development and performance is uniquely qualified to contribute new insight to determine where and how to intervene into the platform economy to ensure a more positive and socially constructive trajectory. First, however, HRD scholars and scholar-practitioners must rethink their identity as a functional agent of individual firms and broaden their perspectives, theories, research, and practices to incorporate a concern and vision for the emerging economy as a whole.

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Author Biographies

Ellen Scully-Russ is an associate professor of Human and Organizational Learning at the George Washington University. Her research interests include the changing nature of work and implications for HRD and adult education.

Richard Torraco is an associate professor in the Department of Educational Administration at the University of Nebraska–Lincoln. He serves as a faculty member in the educational leadership and community college leadership programs and conducts research and teaching in work-force and human resource development, and in community college leadership.

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